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REMARKS

Reconsideration is requested in view of the above amendments and the following remarks. Revisions have been made in claims 1, 3, 4, 6-8 and 10-15. New claims 17-20 have been added. The revisions and the new claims are supported by the original disclosure, e.g., page 1, lines 5-6, page 4, lines 6-7, 12-23, page 5, lines 14-17, page 5, line 26 to page 6, line 9 of the specification and Figs. 4, 5, 7 and 8. Claims 2, 5 and 9 have been canceled without prejudice. Claims 1, 3, 4, 6-8, 10-15 and 17-20 are pending in the application. Applicants respectfully request not to enter the amendments filed on March 14, 2007.

Claim Rejections – 35 USC § 102

Claims 1 and 3-4 are rejected under 35 USC § 102(b) as being anticipated by Jorg Alexnat et al. (US 6,058,702). Applicants respectfully traverse this rejection.

Claim 1 is directed to an exhaust assembly for marine genset including a tubular member having two or more rings and each ring having an inner surface exposing directly to an exhaust gas passageway. Claim 1 also claims the rings being configured to provide constriction of the passageway which causes mixing of cooling water with exhaust gas to reduce noise generated by a combustion engine.

In a marine exhaust system, the tubular member coupled between the combustion engine of a generator set (genset) and a muffler transfers the exhaust gases and the raw water from the genset to the muffler and water separator that are located remote from the genset (see page 1, lines 9-13 of the specification). The claimed exhaust assembly, in particular the rings located on the inner diameter of the tubular member, helps form the water into water droplets when the water flows into the tubular member. The rings constrict the water and interfere with the flow of the water. The water then builds up and spills over the rings, creating turbulence in the water and further creating a substantial amount of water droplets. These water droplets are mixed with gas, and the noise generated by the combustion engine is reduced. The constriction provided by the rings also increases the velocity of the exhaust gas to more effectively pick up drops of water from the bottom of the turbulent member and mix the water with the gas. These factors,

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among others, provide for the sound dampening properties of the tubular member (see page 4, lines 12-23 and page 5, line 27 to page 6, line 9 of the present specification).

Jorg Alexnat et al. fail to disclose or even suggest an inner surface of each of two or more rings exposing directly to an exhaust gas passageway, as claimed in claim 1. Nor do Jorg Alexnat et al. disclose or even suggest the rings being configured to provide constriction of the passageway which causes mixing of the cooling water with the exhaust gas to reduce noise generated by the combustion engine, as claimed in claim 1. On the contrary, the inner surface of Jorg Alexnat et al. sound absorbing materials 57 and 58 does not expose directly to the exhaust gas passageway in that there are pipes 53 and 54 passing through the sound absorbing materials (see Fig. 3 of Jorg Alexnat et al.). The inner surfaces of the Jorg Alexnat et al. sound absorbing materials 57 and 58 are in fact in direct contact with the outer surface of the pipes 53 and 54, rather than exposing directly to the exhaust gas passageway, as claimed in claim 1. As a result, the Jorg Alexnat et al. sound absorbing materials 57 and 58 do not contact the exhaust gases and water exiting the combustion engine, and thus it is impossible for the sound absorbing materials 57 and 58 to provide constriction of the passageway which causes mixing of the cooling water with the exhaust gas to reduce noise generated by the combustion engine, as claimed in claim 1.

For at least these reasons above, claim 1 is patentable over Jorg Alexnat et al. Claims 3 and 4 depend from claim 1 and are patentable along with claim 1 and need not be separately distinguished at this time. Applicants are not conceding the relevance of the rejection to the remaining features of the rejected claims.

Claims 6 and 8 are rejected under 35 USC § 102(b) as being anticipated by Davey (US 5,639,127). Applicants respectfully traverse this rejection.

Claim 6 is directed to an exhaust apparatus for a marine genset including a flexible exhaust hose having two or more rings and each of inner surfaces of the rings exposing directly to an exhaust gas passageway. Claim 6 also claims the rings being configured to provide constriction of the passageway which causes mixing of cooling water with exhaust gas to reduce noise generated by a combustion engine.

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The claimed exhaust apparatus, in particular the present rings located on the inner diameter of the flexible exhaust hose, helps form the water into water droplets when the water flows into the exhaust hose. The rings constrict the water and interfere with the flow of the water. The water then builds up and spills over the rings, creating turbulence in the water and further creating a substantial amount of water droplets. These water droplets are mixed with gas, and the noise generated by the combustion engine is reduced. The constriction provided by the rings also increases the velocity of the exhaust gas to more effectively pick up drops of water from the bottom of the exhaust hose and mix the water with the gas. These factors, among others, provide for the sound dampening properties of the exhaust hose (see for example, page 5, line 27 to page 6, line 9 of the present specification).

Unlike the present invention of claim 6, Davey discusses a flexible coupler apparatus for joining successive lengths of pipe in an exhaust system for a vehicle. Davey fails to disclose or even suggest an inner surface of each of two or more rings exposing directly to an exhaust gas passageway, as claimed in claim 6. Nor does Davey disclose or even suggest the rings being configured to provide constriction of the passageway which causes mixing of the cooling water with the exhaust gas to reduce noise generated by the combustion engine as claimed in claim 6. On the contrary, the inner surface of the Davey spacer members 25 and 26 do not expose directly to an exhaust gas passageway since the inner surfaces of the spacers 25 and 26 are covered by an inner member 20 (see Fig. 1 of Davey). As a result, it is impossible for the Davey spacers 25 and 26 to provide constriction of the passageway which causes mixing of the cooling water with the exhaust gas to reduce noise generated by the combustion engine as claimed in claim 6.

For at least these reasons, claim 6 is patentable over Davey. Claim 8 depends from claim 6 and is patentable along with claim 1 and needs not be separately distinguished at this time. Applicants are not conceding the relevance of the rejection to the remaining features of the rejected claims.

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Claims 11-14 are rejected under 35 USC § 102(c) as being anticipated by Bishop et al. (US 6,843,516). Applicants respectfully traverse this rejection.

Claim 11 is directed to an exhaust apparatus for a marine genset including a rigid tube having at least two rings and each ring having an inner surface exposing directly to an exhaust gas passageway. Claim 11 also claims the rings being configured to provide constriction of the passageway which causes mixing of cooling water with exhaust gas to reduce noise generated by the combustion engine.

The claimed exhaust apparatus, in particular the rings located on the inner diameter of the exhaust tube, helps form the water into water droplets when the water flows into the exhaust hose. The rings constrict the water and interfere with the flow of the water. The water then builds up and spills over the rings, creating turbulence in the water and further creating a substantial amount of water droplets. These water droplets are mixed with gas, and the noise generated by the combustion engine is reduced. The constriction provided by the rings also increases the velocity of the exhaust gas to more effectively pick up drops of water from the bottom of the exhaust tube and mix the water with the gas. These factors, among others, provide for the sound dampening properties of the exhaust tube (see page 4, lines 12-23 of the present specification).

Bishop et al. fail to disclose or even suggest the invention claimed in claim 11. Unlike the present invention of claim 11, Bishop et al. are directed to a coupler for a low pressure piping system for transporting material (Bishop et al., col. 1, lines 22-25). Bishop et al. discuss a seamless metal tube 2 having a U-shaped surface, where an elastomeric annular seal 18 is seated on the inner surface. The Bishop et al. seamless metal tube 2 where the Bishop et al. elastomeric annular seal 18 is seated is not an exhaust gas passageway, as claimed in claim 11, since the material flow is not going to pass through the elastomeric annular seal 18. Rather, the material flow will pass through metal tube 13 that is received in the seamless metal tube 2.

Moreover, the Bishop et al. elastomeric annular seal 18 is completely different from the ring as claimed by claim 11. The Bishop et al. elastomeric annular seal 18 helps ensure that the material flowing through the pipes does not leak out so that an effective and efficient flow is maintained (Bishop et al., col. 1, lines 39-41). The Bishop et al. seal

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18 is actually employed to minimize the interference to the material flow, while the present rings are used to create constrictions and interferences to the water flow.

In addition, the Bishop et al. elastomeric annular seal 18 functions as a seal, contrary to the rings in claim 11, which are configured to provide constriction of the passageway and causes mixing of the cooling water with the exhaust gas to reduce noise generated by the combustion engine.

For at least these reasons, claim 11 is patentable over Bishop et al. Claims 12-14 depend from claim 11 and are patentable along with claim 11 and need not be separately distinguished at this time. Applicants are not conceding the relevance of the rejection to the remaining features of the rejected claims.

Claim Rejections – 35 USC § 103

Claim 2 is rejected under 35 USC 103(a) as being unpatentable over Jorg Alexnat et al. in view of Woon et al. (US 6,408,625). Claim 2 has been canceled without prejudice, rendering the rejection moot. Applicants are not conceding the correctness of the rejection.

Claim 5 is rejected under 35 USC 103(a) as being unpatentable over Jorg Alexnat et al. in view of Smullin et al. (US 6,591,939). Claim 5 has been canceled without prejudice, rendering the rejection moot. Applicants are not conceding the correctness of the rejection.

Claim 7 is rejected under 35 USC 103(a) as being unpatentable over Davey. Applicants respectfully traverse this rejection. Claim 7 depends from claim 6 and is patentable over Davey for at least the same reasons discussed above regarding claims 6 and 8. Applicants are not conceding the relevance of the rejection to the remaining features of the rejected claim.

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Claim 9 is rejected under 35 USC 103(a) as being unpatentable over Davey in view of Smullin et al. Claim 9 has been canceled without prejudice, rendering the rejection moot. Applicants are not conceding the correctness of the rejection.

Claim 10 is rejected under 35 USC 103(a) as being unpatentable over Davey. Applicants respectfully traverse this rejection. Claim 10 depends from claim 6 and is patentable over Davey for at least the same reasons discussed above regarding claims 6 and 8. Applicants are not conceding the relevance of the rejection to the remaining features of the rejected claim.

Claim 15 is rejected under 35 USC 103(a) as being unpatentable over Bishop et al. Applicants respectfully traverse this rejection. Claim 15 depends from claim 11 and is patentable over Bishop et al. for at least the same reasons discussed above regarding claims 11-12 and 13-14. Applicants are not conceding the relevance of the rejection to the remaining features of the rejected claim.

New independent claim 17 is patentable over the references for at least the reasons similar to those discussed above. Claim 17 is directed to an exhaust system for a marine genset including an exhaust tube having two or more rings and each ring having an inner surface exposing directly to an exhaust gas passageway. Claim 17 also claims the rings being configured to provide constriction of the passageway which causes mixing of cooling water with exhaust gas to reduce noise generated by the combustion engine. The reference disclosures fail to disclose or suggest such rings as claimed in claim 17, thus, claim 17 is patentable.

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In view of the above, favorable reconsideration in the form of a notice of allowance is respectfully requested. Any questions regarding this communication can be directed to the undersigned attorney, Michael D. Schumann, Reg. No. 30,422, at (612) 455-3803.



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MDS: cy

Respectfully submitted,

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